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ABSTRACT

The Graduate College at Stout State University commonly employs two criteria in deciding which applicants should be permitted to enroll for graduate degree programs: cumulative undergraduate grade-point average and experience. It was the purpose of this study to determine the effectiveness of these two criteria in predicting the likelihood of completing the master's degree program at Stout State University. To this purpose, this report: (1) presents a general description of the graduate students enrolled at SSU over the period 1960-68 in terms of undergraduate GPA, experience, classification, major field, summer and regular session enrollment, and degree status; (2) attempts to determine the relationship between SSU graduate students' success in obtaining a master's degree and their undergraduate GPA's; and (3) attempts to determine the relationship between SSU graduate students' success in obtaining a master's degree, and the number of years that elapsed between completion of their bachelor's degrees and entrance into graduate degree programs at Stout. (AF)

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FACTORS RELATED TO SUCCESS IN COMPLETING A MASTER'S DEGREE AT STOUT STATE UNIVERSITY 1960-1968

An Institutional Study of
The Graduate College
Stout State University
Menomonie, Wisconsin

April, 1969

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CHAPTER I

THE PROBLEM AND DEFINITION OF TERMS

This study is concerned with the admission policies for degree programs of the Graduate College at Stout State University.

Two criteria commonly employed in deciding which applicants should be permitted to enroll for graduate degree programs are cumulative undergraduate grade point average and experience. This study is concerned with the effectiveness of these two criteria as predictors of the likelihood of completing a master's degree program at Stout State University.

For a number of years, Stout required students to present a cumulative undergraduate grade point average of at least 2.50 (A = 4.0) for admission with full status; students with averages between 2.25 and 2.49 were allowed probationary status. In 1968, the Graduate Council adopted the policy set by the guidelines for graduate programs in Wisconsin state universities. This set an average of 2.75 for full status admission with probationary status awarded to applicants with averages between 2.25 and 2.74.

Several Stout graduate programs suggest that experience is desirable but none require it.

I. THE PROBLEM

Statement of the Problem. It was the purpose of this study (1) to present a general description of the graduate students enrolled at Stout State University over the period 1960-1968 in terms of undergraduate grade point average, experience, classification, major field, summer and regular session enrollment, and degree status; (2) to determine the relationship between Stout State University graduate students' success in obtaining master's degrees, and their undergraduate grade point averages; and (3) to determine the relationship

between Stout State University graduate students' success in obtaining master's degrees, and the number of years that elapsed between completion of their bachelor's degrees and entrance into graduate degree programs at Stout.

Limitation of the Problem. Since this study is concerned with success in attaining a master's degree, only those students seeking that degree are considered. The Graduate College at Stout offers coursework to graduate students who are not pursuing a degree. Students enrolled for such purposes are classified as special students. These special students are not included in this study except where such information is considered pertinent to the description of the Graduate College enrollment. This study is also limited to those students who enrolled in the Graduate College at Stout for the first time between September 1, 1960 and August 30, 1968.

II. DEFINITIONS OF TERMS USED

Degree status. This term refers to the status of the student's program of study. If the student has completed his graduate work and received the master's degree, his degree status is referred to as graduated. If the student is still working toward the completion of his degree, his degree status is referred to as not-graduated. Students who have dropped out of their graduate program at Stout are not included in the study. However, it is possible that some students have dropped without notifying the Graduate College. These students cannot be identified.

Classification. This term refers to registration classification. If the student was admitted to the Graduate College prior to the completion of his undergraduate degree, he was considered a split program student. If he held a bachelor's degree at the time of his admission, he was considered a regular student.

Old Probation. This term applies to academic scholarship. A student admitted to the Graduate College during the past eight years with an undergraduate grade point average of less than 2.50 is considered on probation.

New Probation. This term applies to any student admitted to the Graduate College during the past eight years with an undergraduate grade point average of less than 2.75.

Time-Elapsed--Experience. This term refers to the amount of time elapsed between the completion of the bachelor's degree and the first enrollment in the Graduate College at Stout. It does not include experience a person may have had prior to the completion of his undergraduate degree or experience obtained during the pursuit of the graduate degree.

Major Field. This term refers to the major field of study that the student elected to pursue in the completion of the requirements for his graduate degree. Six major fields are included: (1) Industrial Education; (2) Home Economics (including Home Economics Education, Food Science and Nutrition, and Clothing and Textiles); (3) Vocational Education; (4) Guidance; (5) Audio-Visual Communications; and (6) Vocational Rehabilitation. Presently, the three sub-divisions of Home Economics are treated separately, but during the period of this study, such was not true.

Degree Student. Degree students are enrolled in a graduate program leading to a master's degree in a specific major field. This term, by definition, excludes special students.

Special Student. Special students are enrolled in the Graduate College but are not pursuing a master's degree in a specific major field. These students are not required to meet minimum grade point requirements for admission to the Graduate College but must simply present evidence that they

hold a bachelor's degree. This term, by definition, excludes degree students.

All graduate students are categorized as either special students or degree students.

CHAPTER II

SOURCES OF DATA AND METHODS OF PROCEDURE

The first step in this study was to develop a work sheet that could be used to record all data pertinent to the problem. It provided space to record each student's major field, undergraduate grade point average, registration classification, date of award of bachelor's degree, date of first enrollment in the Graduate College, date of award of master's degree, and classification (special student or degree student).

Next, the names of all students were recorded on the work sheet. The official enrollment book was used for this purpose. It also provided the date that each student first enrolled in the Graduate College.

The card index to the individual student files identified each student with his major field or, in case the student was not seeking a degree, it defined him as a special student. The remainder of the information to complete the work sheet was obtained from the individual student files.

Once the work sheets were completed, the data were tabulated to determine the relationships being questioned in this study. The work sheet data were also used to present an overall description of the graduate students enrolled at Stout.

CHAPTER III

INTERPRETING THE DATA

I. DESCRIBING THE GRADUATE ENROLLMENT

One of the purposes of this paper was to describe the graduate students at Stout. Tables I, II, and III are devoted to this task.

Table I shows the number of new enrollees each summer and regular session. The entries are made according to major field. Table II shows the average undergraduate grade point averages of the new enrollees by term entered and major chosen. Table I should be referred to when using Table II because many of the grade points could be misleading without knowing the size of the groups on which they are based. For example, Table II shows a mean grade point average of 3.70 for the students who enrolled in audio-visual communications for the first time during the regular session 1962-63. However, Table I reveals that only one student was in that category.

Table III reports certain status factors describing the new enrollees who began their graduate work during the period covered by this study.

Column one shows the number of students enrolling for the first time who were seeking a master's degree.

Columns two and three illustrate the effect of changing the minimum grade point requirement for admission with full status. Column three shows the percentage who would have been admitted on probation if the requirement had been 2.75. It is apparent that the number of probation students is approximately doubled by the change in policy.

TABLE I

NUMBER OF NEW DEGREE STUDENTS ENROLLED IN THE GRADUATE COLLEGE ACCORDING TO THEIR MAJOR FIELD[1]

Major Field	"60 "61	Sum "61	"61 "62	Sum "62	"62 "63	Sum "63	"63 "64	Sum "64	"64 "65	Sum "65	"65 "66	Sum "66	"66 "67	Sum "67	"67 "68	Sum "68
Audio-Visual Communications	1	6	3	3	1	5	4	8	6	11	6	8	8	10	11	24
Guidance	10	21	9	24	12	31	17	27	22	25	28	30	19	31	37	35
Home Economics	9	6	4	12	1	13	10	17	16	16	16	28	13	15	16	18
Industrial Education	42	33	27	24	28	51	28	42	40	47	51	30	42	29	34	48
Vocational Education	2	9	3	12	6	3	11	18	6	18	11	8	8	15	14	18
Vocational Rehabilitation														6	6	1

TABLE II

MEAN UNDERGRADUATE GRADE POINT AVERAGES OF NEW DEGREE STUDENTS ENTERING GRADUATE COLLEGE[2]

Major Field	"60 "61	Sum "61	"61 "62	Sum "62	"62 "63	Sum "63	"63 "64	Sum "64	"64 "65	Sum "65	"65 "66	Sum "66	"66 "67	Sum "67	"67 "68	Sum "68
Audio-Visual Communications	3.60	2.70	2.73	2.87	3.70	2.64	2.63	2.88	2.55	2.72	2.78	2.79	2.70	2.68	3.05	2.75
Guidance	2.81	2.80	2.66	2.92	2.86	2.84	2.61	2.58	2.77	2.72	2.76	2.69	2.71	2.82	2.69	2.79
Home Economics	3.10	2.93	3.43	2.61	3.50	2.81	3.23	2.79	2.93	2.93	3.03	2.85	2.87	3.07	2.84	2.75
Industrial Education	2.68	2.81	2.87	2.70	2.70	2.65	2.82	2.79	2.85	2.77	2.84	2.70	2.82	2.69	2.95	2.71
Vocational Education	2.85	2.68	2.90	2.58	2.87	2.64	2.96	2.80	2.87	2.64	2.86	2.64	3.08	2.65	2.71	2.69
Vocational Rehabilitation														2.75	2.70	2.80

[1]Table includes only the degree students who were enrolled for the first time during the session indicated.

[2]Ibid.; Some grade points may be misleading, refer to Table I to find the size of the population. All grade points are undergraduate (cumulative).

TABLE III

DESCRIPTION OF NEW GRADUATE ENROLLEES -- 1960-68

Session First Enrolled in Graduate College	Number of Degree Students	Below 2.50 Grade Point	Below 2.75 Grade Point	Split Program		Time Elapsed Between Completion of Bachelor's Degree and Entrance Into a Master's Degree Program: 0 Years* Experience		1-5 Years Experience		6+ Years Experience	
1960-61	64	21%	50%	50%	32	20%	13	23%	15	6%	4
Summer 1961	75	20%	61%	4%	3	15%	11	55%	41	27%	20
1961-62	46	13%	41%	50%	23	26%	12	9%	4	15%	7
Summer 1962	73	30%	58%	7%	5	11%	8	49%	36	33%	24
1962-63	48	24%	58%	29%	14	31%	15	23%	11	17%	8
Summer 1963	113	30%	71%	4%	4	11%	12	58%	65	28%	32
1963-64	70	13%	47%	41%	29	21%	15	17%	12	20%	14
Summer 1964	111	28%	60%	6%	7	16%	18	54%	60	23%	26
1964-65	90	16%	52%	31%	28	27%	24	24%	22	18%	16
Summer 1965	117	30%	63%	10%	12	18%	21	54%	63	18%	21
1965-66	112	16%	42%	36%	40	29%	33	20%	22	15%	17
Summer 1966	105	22%	58%	6%	6	14%	15	42%	44	38%	40
1966-67	90	11%	41%	39%	35	32%	29	21%	19	8%	7
Summer 1967	106	26%	55%	3%	3	21%	22	43%	46	33%	35
1967-68	118	25%	48%	19%	22	20%	24	36%	43	25%	29
Summer 1968	144	28%	58%	6%	9	23%	33	56%	81	15%	21

*Includes all students with less than one year between completion of their bachelor's degrees and their entrance into graduate degree programs at Stout.

Columns four, five, six and seven are concerned with the amount of experience the degree student had between undergraduate and graduate college. It will be noted that the percentage of students with more than one year of experience is higher in the summers than in the regular sessions. Another notable fluctuation exists between the summer and regular session enrollment of split program students. Regular sessions contain more split program students than do summer sessions. This situation probably develops as a result of the students who need only a few credits to complete their undergraduate work. Many of these students prefer taking some graduate credit to carrying a light load. This opinion is supported by Figure II which shows, with few exceptions, the split program students who enroll during regular school sessions are less likely to complete a graduate degree than the other students. These students were probably motivated to take the graduate work because it was convenient.

II. THE RELATIONSHIP BETWEEN SUCCESS AND UNDERGRADUATE GRADE POINT AVERAGE

One of the purposes of this study was to determine the relationship between undergraduate grade point average and likelihood of completing a graduate degree program. Figures Ia and Ib give a visual presentation of this relationship.

It should be pointed out that the Graduate College allows seven years from the first date of enrollment for the students to complete their degree requirements. The reader is cautioned about making any generalizations regarding the sessions after the Summer of 1962 since these students still had some time remaining for the completion of their degree requirements.

It will be noticed that the percentages of entrants completing degrees drop in the more recent enrollment periods. This trend is to be expected because

FIGURE Ia

PERCENTAGE OF DEGREE STUDENTS GRADUATED
ACCORDING TO ENTERING GRADE
POINT AVERAGE

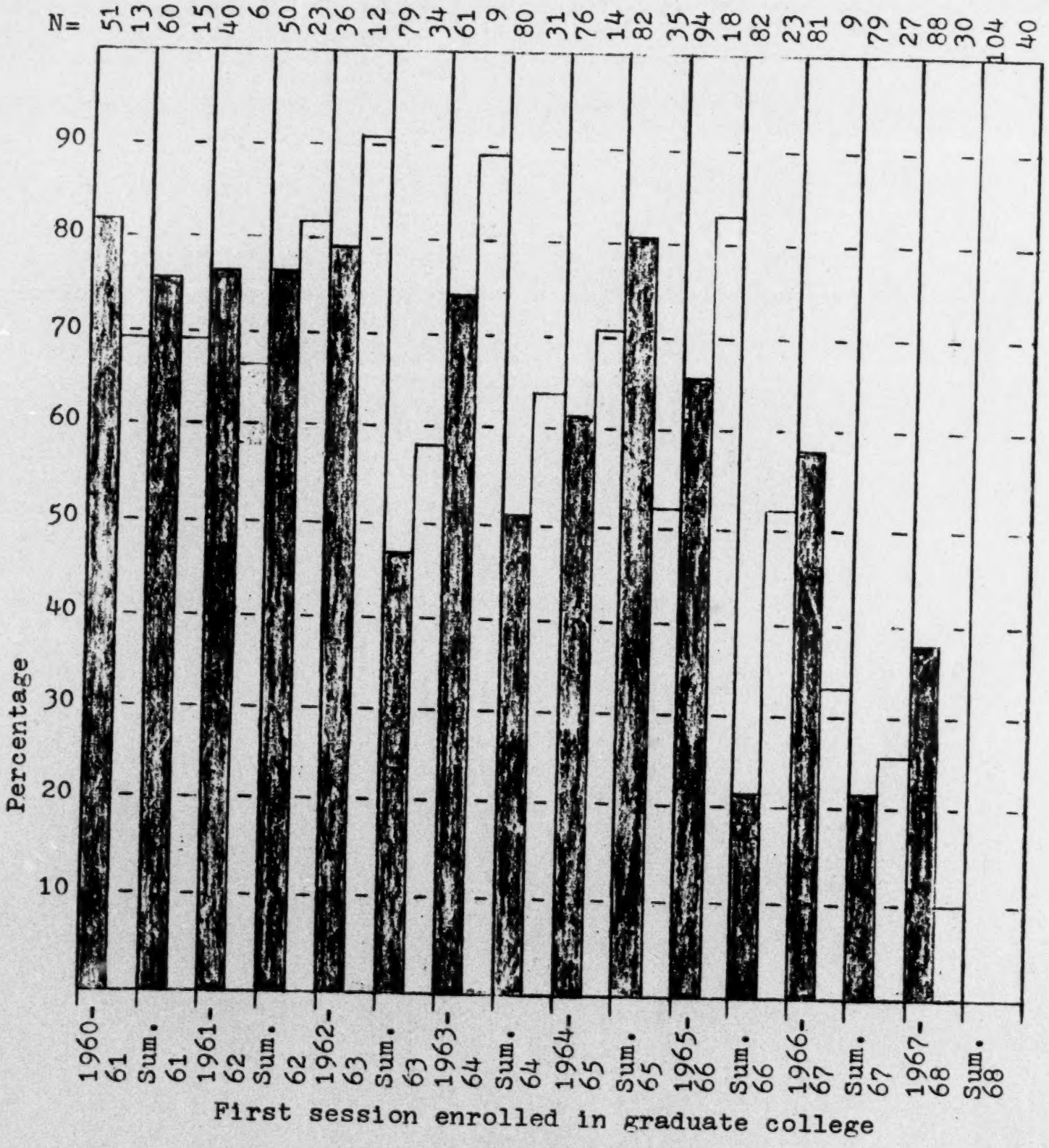
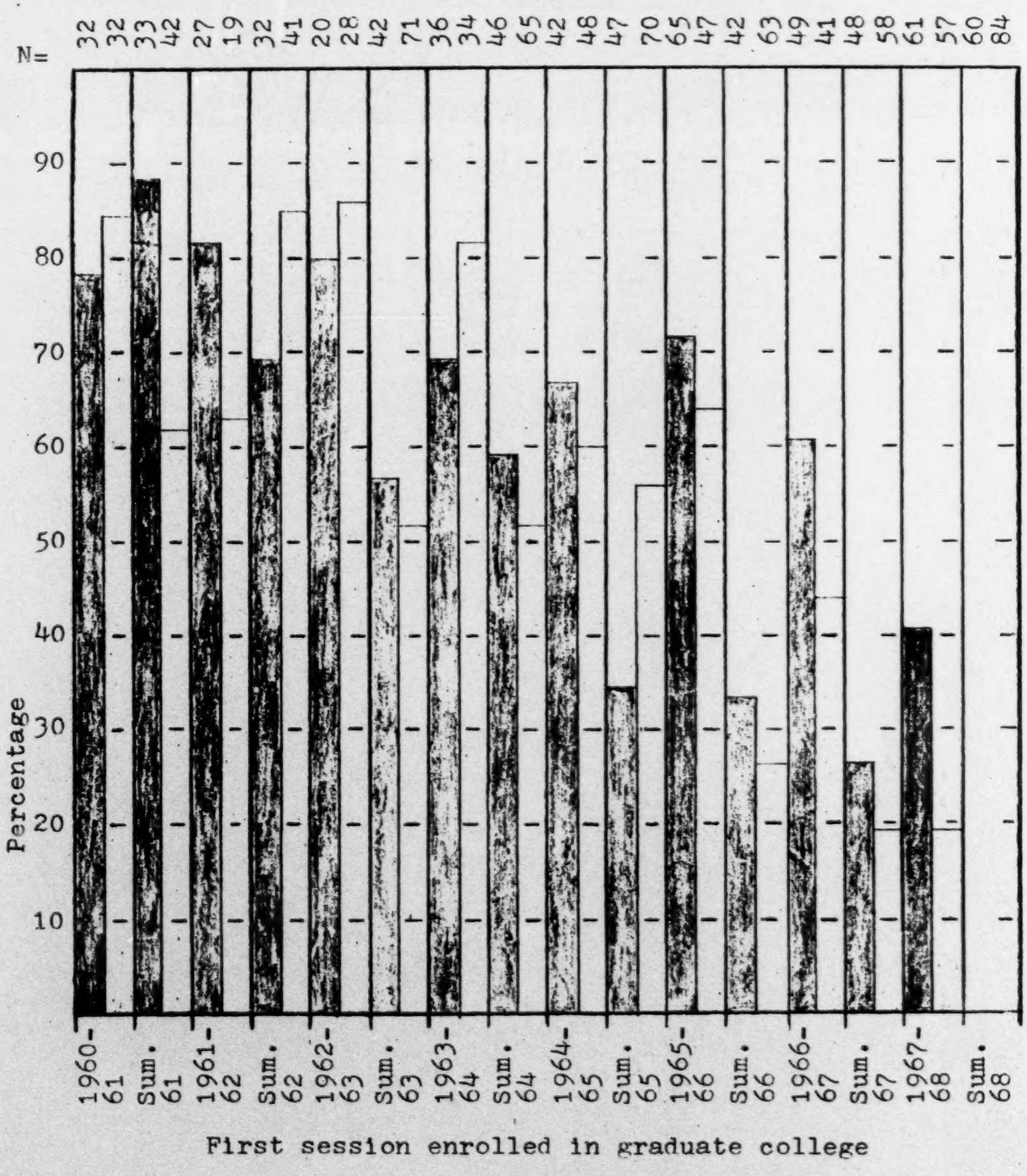


FIGURE Ib

PERCENTAGE OF DEGREE STUDENTS GRADUATED
ACCORDING TO ENTERING GRADE
POINT AVERAGE



these students haven't had as much time to complete the degree requirements as the students who enrolled in earlier sessions.

There seems to be a difference in the percentage of degrees granted to students who first enrolled during summer sessions as compared to regular sessions. This difference makes itself apparent beginning with the summer session of 1963 and continues to the present. However, the fact that it begins in 1963 might be significant. It is true that the summer students take more time to complete their degrees but this should not be interpreted to mean that they won't graduate. It is likely that many of these students are pursuing their degrees only during the summers. As a consequence, they would be expected to be making slower progress than full time students.

As a whole, Figures Ia and Ib seem to indicate that there is little relationship between undergraduate grade point average and success in obtaining a master's degree at Stout. However, the students who first enrolled during the regular school session of 1960-61 and summer session 1961 are the only groups for whom the seven year limit has expired.

III. THE RELATIONSHIP BETWEEN SUCCESS IN COMPLETING A DEGREE AND EXPERIENCE

One of the purposes of this study was to determine the relationship between graduate degree success and the amount of time between the bachelor's degree and the first enrollment in the Graduate College. Figure II gives a visual presentation of this relationship.

Four general experience categories were established for the purpose of this study. They are (1) split program, (2) zero years experience (which included everyone with less than one full year), (3) one through five years

FIGURE II

PERCENTAGE OF DEGREE STUDENTS GRADUATED ACCORDING TO THE AMOUNT OF TIME ELAPSED BETWEEN B.S. DEGREE AND FIRST ENROLLMENT

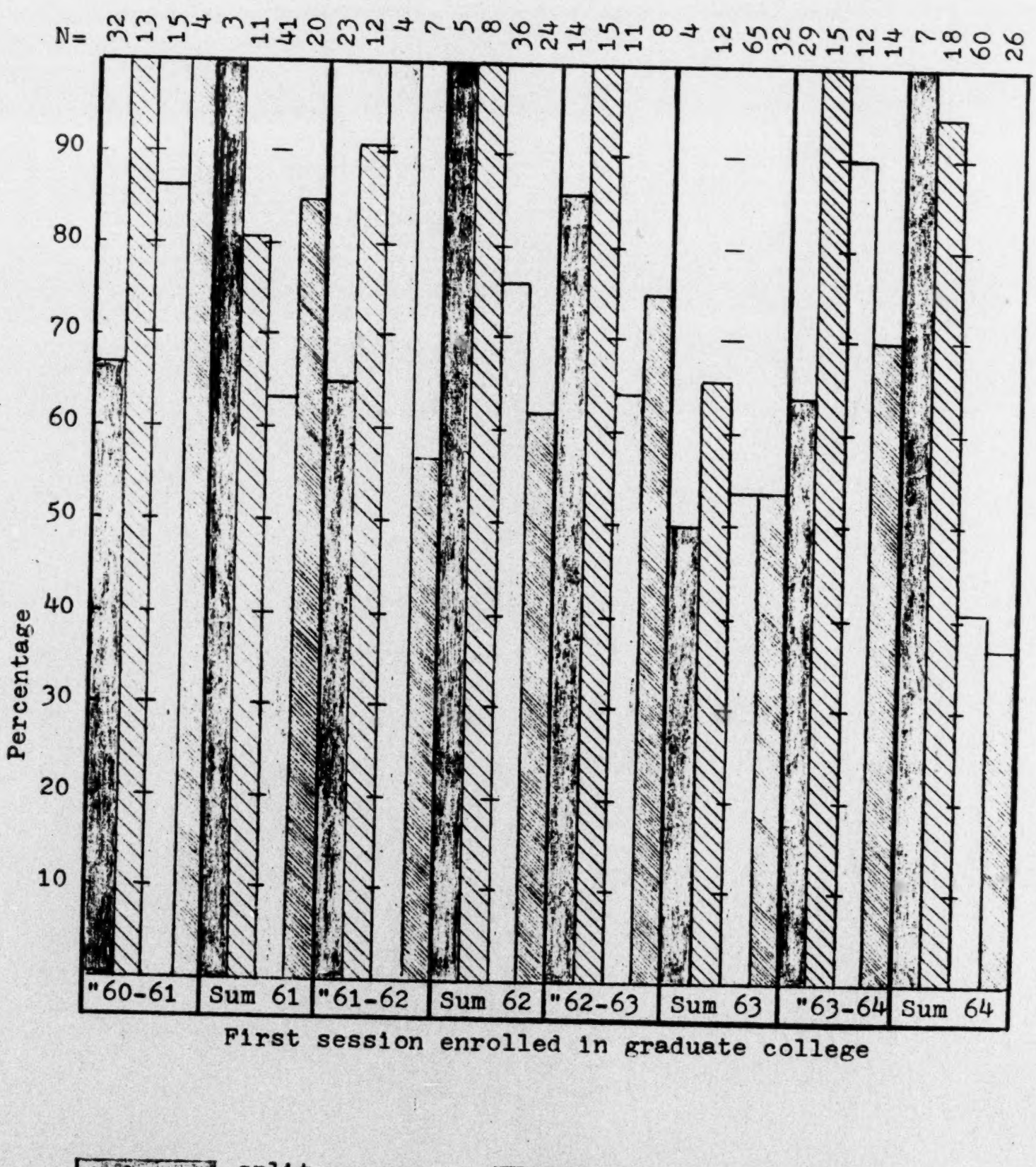
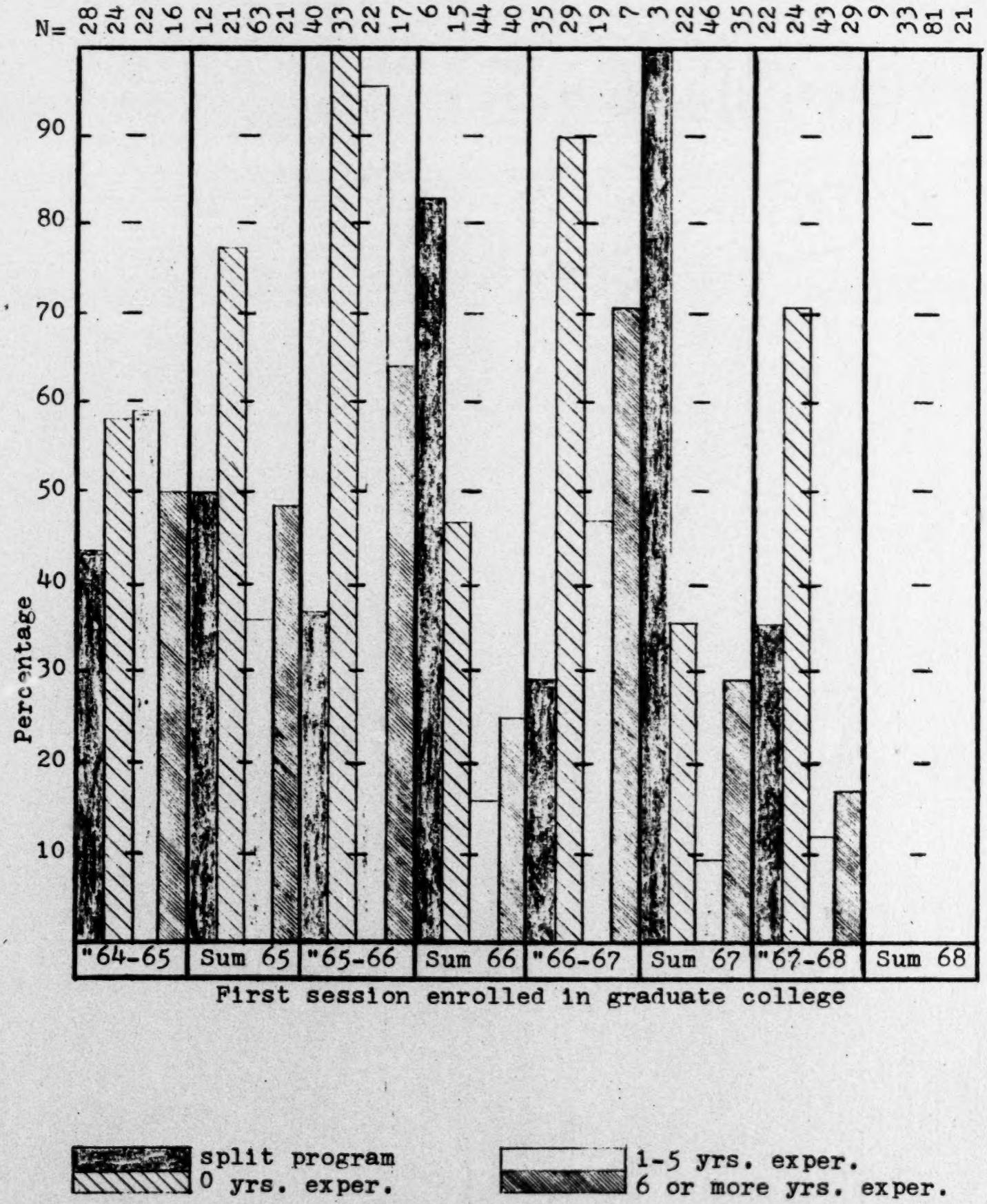


FIGURE II (continued)



experience, and (4) six or more years experience.

Figure II shows the percentage of degree students entering the Graduate College in each of the four experience categories who had graduated as of September 1968.

No generalizations should be made about the data in this figure without considering the time allowed by the Graduate College for the completion of degree requirements. The students are allowed seven years from their first date of enrollment to complete these requirements. Therefore, the students who began their graduate work during the regular session of 1960-61 and summer session of 1961 are the only students in this study whose time limit has expired.

The letter (N) located near the upper left hand corner of the graph represents the total number of students in the appropriate category during each session. The reader should note that some of these groups had very small numbers of students and can't be considered good samples. This is particularly true of the number of split program students enrolled during summer sessions.

One important and consistent relationship is illustrated in Figure II. The category involving students with zero years experience has a higher percentage of students who graduated than do the other categories. It is not only a higher percentage but is consistent from one session to another, whereas the other categories are quite variable. The reasons behind the success of these students were not investigated in this study. Further research should be conducted to determine the influences which created this situation.

CHAPTER IV

STATISTICAL TREATMENTS

This chapter is concerned with statistical tests of the relationships between selected criteria and success in completing a master's degree.

Two groups of comparisons were made:

(1) Cumulative undergraduate grade point average compared to likelihood of completing a master's degree.

(2) Amount of time elapsed between completing the bachelor's and beginning the master's degree compared to likelihood of completing a master's degree.

The statistic used in all tests was chi-square. The five percent level was chosen for rejection of the null hypothesis. All students were categorized as "graduated"or "not graduated" in terms of their status on September 1, 1968. Appropriate categories of undergraduate grade point averages and time elapsed between completing a bachelor's degree and beginning a master's degree were developed for each test and are explained in the applicable sections in this chapter. They are the categories used in the previous chapters of this study.

The data for summer session new enrollees were treated separately from the data regarding regular session new enrollees in the following tests. This was done because a high percentage of the summer session new enrolless attend the Graduate College only during the summers. The summer students may also have different motives for obtaining masters' degrees than do the regular session students. For these reasons, the researchers felt that the summer session students and regular session students constituted two different

populations.

Since a high percentage of summer students attend the Graduate College only during the summers, they would not be expected to graduate as soon after their first enrollment as would regular session students. In most cases, summer graduate students attend four summers before receiving their degrees, while regular session students require one year. To allow for the relative difference in rate of graduation, the data were treated over two different periods. The graduation status as of September 1968 was determined for summer students who enrolled for the first time between September 1960 and August 1965. The graduation status as of September 1968 was determined for regular session students who enrolled for the first time between September 1960 and September 1967. Thus, one year was allowed as the normal time required for regular session students to graduate and four summers were allowed as the normal time required for summer session students to graduate.

I. RELATIONSHIP BETWEEN CUMULATIVE UNDERGRADUATE GRADE POINT AVERAGE AND LIKELIHOOD OF COMPLETING A MASTER'S DEGREE

Prior to September, 1968, a cumulative undergraduate grade point average of 2.50 was required for admission to a master's degree program with full status. After that date, the required average was raised to 2.75. The effectiveness of each of these standards was investigated in the tests reported in this section.

Four individual tests were made in an attempt to reveal the relationship between cumulative undergraduate grade point average and success in completing a master's degree. The tests are as follows:

(1) Among regular session enrollees,

(a) are students with cumulative undergraduate grade point averages of 2.75 or above more likely to complete a master's degree than those with lower averages?

(b) are students with cumulative undergraduate grade point averages of 2.50 or above more likely to complete a master's degree than those with lower averages?

(2) Among summer session enrollees,

(a) are students with cumulative undergraduate grade point averages of 2.75 or above more likely to complete a master's degree than those with lower averages?

(b) are students with cumulative undergraduate grade point averages of 2.50 or above more likely to complete a master's degree than those with lower averages?

Test 1a: Regular Session Graduate Students--Grade Point Average Criterion of 2.75

The data in the following table were used to test the null hypothesis, "Regular session graduate students with cumulative undergraduate grade point averages of 2.75 or above are not significantly more likely to complete a master's degree than are students with lower averages."

TABLE IV

DATA FOR TEST 1a

Cumulative Undergraduate Grade Point Average	Graduation Status on September 1, 1968		Totals
	Graduated	Not Graduated	
Below 2.75	173	103	276
2.75 and above	199	103	302
	372	206	578

Chi-square was calculated for these data and found to be .516. A table of chi-square values was entered with one degree of freedom; it was observed that a value this large would occur due to random sampling error with a probability greater than thirty percent.

Thus, it was not possible to reject the null hypothesis and it was concluded that a criterion undergraduate grade point average of 2.75 is not effective in predicting the likelihood of completing a master's degree for regular session enrollees.

Test 1b: Regular Session Graduate Students--Grade Point Average Criterion of 2.50

The data in the following table were used to test the null hypothesis, "Regular session graduate students with cumulative undergraduate grade point averages of 2.50 or above are not significantly more likely to complete a master's degree than students with lower averages."

TABLE V

DATA FOR TEST 1b

Cumulative Undergraduate Grade Point Average	Graduation Status on September 1, 1968		Totals
	Graduated	Not Graduated	
Below 2.50	61	33	94
2.50 and above	311	173	484
	372	206	578

Chi-square was calculated for these data and found to be .000. Such a value indicates that the slight differences can be attributed to random sampling error with a probability of almost 100%.

Thus, the null hypothesis was not rejected and it was concluded that a criterion undergraduate grade point average of 2.50 is not effective in

predicting the likelihood of completing a master's degree for regular session enrollees.

Test 2a: Summer Session Graduate Students--Grade Point Average Criterion of 2.75

The data in the following table were used to test the null hypothesis, "Summer session graduate students with cumulative undergraduate grade point averages of 2.75 or above are not significantly more likely to complete a master's degree than are students with lower averages."

TABLE VI

DATA FOR TEST 2a

Cumulative Undergraduate Grade Point Average	Graduation Status on September 1, 1968		Totals
	Graduated	Not Graduated	
Below 2.75	171	118	289
2.75 and above	118	82	200
	289	200	489

Chi-square was calculated for these data and found to be .0013. A table of chi-square values was entered with one degree of freedom; it was observed that a value this large would occur due to random sampling error with a probability greater than 95%.

Thus, it was not possible to reject the null hypothesis and it was concluded that a criterion undergraduate grade point average of 2.75 was not effective in predicting the likelihood of completing a master's degree for summer session enrollees.

Test 2b: Summer Session Graduate Students--Grade Point Average Criterion of 2.50

The data in the following table were used to test the null hypothesis,

"Summer session graduate students with cumulative undergraduate grade point averages of 2.50 or above are not significantly more likely to complete a master's degree than are students with lower averages."

TABLE VII

DATA FOR TEST 2b

Cumulative Undergraduate Grade Point Average	Graduation Status on September 1, 1968		Totals
	Graduated	Not Graduated	
Below 2.50	80	59	139
2.50 and above	209	141	350
	289	200	489

Chi-square was calculated for these data and found to be .124. A table of chi-square values was entered with one degree of freedom; it was found that a value this large would occur due to random sampling error with a probability greater than 70%.

Thus, it was not possible to reject the null hypothesis and it was concluded that a criterion undergraduate grade point average of 2.50 is not effective in predicting the likelihood of completing a master's degree for summer session enrollees.

II. RELATIONSHIP BETWEEN TIME ELAPSED AFTER COMPLETING A BACHELOR'S AND BEGINNING A MASTER'S DEGREE AND LIKELIHOOD OF COMPLETING A MASTER'S DEGREE PROGRAM

Two individual tests were made to determine if various amounts of time elapse between completion of a bachelor's and inauguration of a master's degree program had any effect on the likelihood of actually completing that degree program.

One test concerned regular session enrollees and the other involved summer

session enrollees. Time elapse categories were: (a) split program, still working on bachelor's degree at time of first master's degree work, (b) less than one year, which was called "zero" because most of the group were continuing on directly from a bachelor's program, (c) one to five years, and (d) more than five years.

Test 1: Regular Session Graduate Students--Effect of Time Lapse Between Finishing Bachelor's and Beginning Master's Degree

Between September, 1960 and September, 1967, a total of 578 degree seeking students began their graduate work at Stout during a regular academic year. By September, 1968, 368 of them had been awarded the master's degree by the university. Table VIII shows this group of degree seeking students classified by the amount of time elapsed between completing the bachelor's and beginning the master's degree.

It can be observed that there are fairly large differences in the graduation rates of some of these groups. About half of the split program students earned a degree while about 85% of the group continuing on directly from their bachelor's degrees completed the program. The two larger time elapsed categories appear fairly similar in their rates of graduation.

TABLE VIII

NUMBER OF STUDENTS GRADUATING CLASSIFIED BY AMOUNT OF TIME ELAPSED BETWEEN COMPLETING BACHELOR'S AND BEGINNING MASTER'S DEGREES--REGULAR SESSIONS

Time Elapsed	Graduated	Not Graduated	Totals
Split Program	104	100	204
0 Years	134	22	156
1-5 Years	79	50	129
6 or More Years	51	38	89
Totals	368	210	578

To further investigate the possible relationship, the following null hypothesis was stated, "There is no relationship between amount of time between completing a bachelor's and beginning a master's degree program and the likelihood of actually completing the master's degree program."

Table IX was developed to provide data to make the test. The first portion of the table contains the information contained in Table VIII. Under "expected frequencies" are included the frequencies that would be found if the graduation rates of each time elapsed group were the same. The remaining columns are used to calculate chi-square, the test statistic. The amount contributed to the total chi-square by each time elapsed category is shown in the last column.

A total chi-square of 47.3 was found. A table of chi-square values was entered with three degrees of freedom; it was observed that a value this large would occur due to random sampling error with a probability of less than 0.1%.

The null hypothesis was rejected and it was concluded that there is a difference among at least some of the time elapsed groups as regards likelihood of completing a master's degree.

A further inspection of Table IX reveals that two of the time elapsed categories produced practically all of the chi-square total. The two categories are "split program" and "zero years." A comparison of each of these chi-squares (13.1 and 32.2) with chi-square table values for one degree of freedom (two categories minus one) reveals that both are significant at the .001 level. The observed chi-squares for the other two categories fall well within the values attributable to random sampling error.

It was concluded that split program students are significantly less likely to complete a degree program; students continuing on directly from their

bachelor's degrees are significantly more likely to complete a degree program; students with a year or more elapsed follow the graduation rate of the total group of degree seeking regular session graduate students at Stout.

Test 2: Summer Session Graduate Students--Effect of Time Lapse Between Finishing Bachelor's and Beginning Master's Degree

Between September, 1960 and August, 1965, a total of 489 degree seeking students began their graduate work during a summer session. By September, 1968, 285 of them had been awarded the master's degree by the university. Table X shows this group of degree seeking students classified by the amount of time elapsed between completing the bachelor's and beginning the master's degree.

It can be observed that there are fairly large differences in the graduation rates of some of these groups. About half of the students with one to five years between earning a bachelor's and beginning a master's degree actually completed the latter degree while about three-fourths of the students with smaller time lapses were similarly successful.

TABLE X

NUMBER OF STUDENTS GRADUATING CLASSIFIED BY AMOUNT OF TIME ELAPSED BETWEEN COMPLETING BACHELOR'S AND BEGINNING MASTER'S DEGREES--SUMMER SESSIONS

Time Elapsed	Graduated	Not Graduated	Totals
Split Program	23	8	31
0 Years	58	12	70
1-5 Years	135	130	265
6 or More Years	69	54	123
Totals	285	204	489

To further investigate the possible relationship, the following null hypothesis was stated, "There is no relationship between amount of time between

completing a bachelor's and beginning a master's degree program and the likelihood of actually completing the master's degree program."

Table XI was developed to provide data to make the test. The first portion of the table contains the information contained in Table X. Under "expected frequencies" are included the frequencies that would be found if the graduation rates of each time elapsed group were the same. The remaining columns are used to calculate chi-square, the test statistic. The amount contributed to the total chi-square by each time elapsed category is shown in the last column.

A total chi-square of 26.5 was found. A table of chi-square values was entered with three degrees of freedom; it was observed that a value this large would occur due to random sampling error with a probability of less than 0.1%.

The null hypothesis was rejected and it was concluded that there is a difference among at least some of the time elapsed groups as regards likelihood of completing a master's degree.

A further inspection of Table XI reveals that two of the time elapsed categories produced practically all of the chi-square total. These are "zero years" and "one to five years." A comparison of each of these chi-squares (17.0 and 5.9) with chi-square table values for one degree of freedom reveals both significant at the five percent level and the first (zero years) at the 0.1% level.

It was concluded that students who continue on directly from their bachelor's degree with no time break are significantly more likely to earn a master's degree and those with a time lapse of one to five years are significantly less likely to complete such a program.

TABLE IX

CHI-SQUARE CALCULATION DATA--TIME ELAPSED BETWEEN COMPLETION OF BACHELOR'S AND BEGINNING MASTER'S DEGREE AND LIKELIHOOD OF EARNING A MASTER'S DEGREE--REGULAR SESSION STUDENTS

Time Elapsed	Observed Frequencies (fo)			Expected Frequencies (fe)			fo - fe		$(fo - fe)^2$		$(fo - fe)^2/fe$		Total Chi-square
	Grad.	Not Grad.	Totals	Grad.	Not Grad.	Totals	Grad.	Not Grad.	Grad.	Not Grad.	Grad.	Not Grad.	
Split Program	104	100	204	129	75	204	-25	+25	625	625	4.8	8.3	13.1
0 Years	134	22	156	100	56	156	+34	-34	1156	1156	11.6	20.6	32.2
1-5 Years	79	50	129	82	47	129	-3	+3	9	9	0.1	0.2	0.3
6 or More Years	51	38	89	57	32	89	-6	+6	36	36	0.6	1.1	1.7
Totals	368	210	578										47.3

TABLE XI

CHI-SQUARE CALCULATION DATA--TIME ELAPSED BETWEEN COMPLETION OF BACHELOR'S AND BEGINNING MASTER'S DEGREE AND LIKELIHOOD OF EARNING A MASTER'S DEGREE--SUMMER SESSION STUDENTS

Time Elapsed	Observed Frequencies (fo)			Expected Frequencies (fe)			fo - fe		$(fo - fe)^2$		$(fo - fe)^2/fe$		Total Chi-square
	Grad.	Not Grad.	Totals	Grad.	Not Grad.	Totals	Grad.	Not Grad.	Grad.	Not Grad.	Grad.	Not Grad.	
Split Program	23	8	31	18	13	31	+5	-5	25	25	1.4	1.9	3.3
0 Years	58	12	70	41	29	70	+17	-17	289	289	7.0	10.0	17.0
1-5 Years	135	130	265	154	101	265	-19	+19	361	361	2.3	3.6	5.9
6 or More Years	69	54	123	72	51	123	-3	+3	9	9	0.1	0.2	0.3
Totals	285	204	489										26.5

CHAPTER V

SUMMARY AND CONCLUSIONS

I. SUMMARY

Purpose of the Study.

It was the purpose of this study (1) to present a general description of the graduate students enrolled at Stout State University over the past eight years in terms of undergraduate grade point average, experience, classification, major field, summer and regular session enrollment, and degree status, (2) to determine the relationship between the success of Stout State University graduate students in obtaining master's degrees and their undergraduate grade point averages, and (3) to determine the relationship between the success of Stout State University graduate students in obtaining master's degrees and the number of years that elapsed between completion of bachelor's degrees and entrance into graduate degree programs at Stout.

Population.

The population of this study is limited to graduate students who enrolled for graduate credit at Stout for the first time between September 1, 1960 and September 1, 1968, with the stated intention of earning a master's degree from Stout State University.

In the analysis of the effectiveness of undergraduate grade point average and time elapsed between completion of the bachelor's and beginning the master's degree program, two populations were used. Students beginning graduate work during the summer sessions of 1961 - 1965 inclusive comprised one group; students beginning graduate work during academic years from 1960

to 1967 comprised the other.

Research Design.

The data for the study were compiled from the official records of the Graduate College including the enrollment book, the card index to individual files, and the individual folders maintained for each student. A data collection form was developed for use in assembling the data for each student.

All students were categorized on the basis of several criteria.

(1) Session in which first graduate work was taken at Stout.

(2) Degree status on September 1, 1968.

(3) Amount of time elapsed between completion of the bachelor's and beginning the master's degree.

(4) Cumulative undergraduate grade point average.

(5) Major field selected for master's degree program.

(6) Intention of earning a master's degree at Stout versus special non-degree status.

Tables and figures were developed to describe the graduate enrollment on the basis of the above categories and to give a picture of the relationship among several pertinent factors.

Two sets of statistical analyses were conducted by use of chi-square.

(1) Relationship between two criterion cumulative undergraduate grade point averages (2.50 and 2.75) and likelihood of completing a master's degree.

(2) Relationship of various periods of time lapse between completing the bachelor's and beginning the master's degree and likelihood of completing the master's degree.

II. CONCLUSIONS

Rate of Completion of the Master's Degree.

Of the 489 students who entered the Graduate College during the summer

sessions of 1961, 1962, 1963, 1964, and 1965 with the stated intention of completing a master's degree at Stout State University, 285 (58%) had actually completed the degree by September, 1968.

Of the 578 students who entered the Graduate College during a regular session between September, 1960 and September, 1967, with the stated intention of completing a master's degree at Stout State University, 368 (64%) had actually completed the degree by September, 1968.

Thus, sixty-one percent of the students who entered the Graduate College after September, 1960, with the expressed intention of earning a degree and for whom sufficient time had elapsed to reasonably allow them to complete degree requirements have actually been awarded the master's degree by Stout State University.

It is likely that some more will complete their degrees because the seven-year limit had not yet expired for the entire group studied by September, 1968.

Effectiveness of the Cumulative Undergraduate Grade Point Average as a Predictor of Success in Completing a Master's Degree.

On the basis of the data analyzed for 1067 students entering the Graduate College after September, 1960, it appears that cumulative undergraduate grade point average is not an effective determiner of the likelihood of completing a master's degree. Neither criterion grade point average (the 2.50 used prior to 1968 nor the 2.75 adopted in September, 1968) proved to be significantly related to success in completing a master's degree at Stout State University.

Relationship of Time Elapsed After Completing a Bachelor's and Enrolling for a Master's Degree and the Likelihood of Completing the Master's Degree.

On the basis of the data analyzed, it was found that students who continue on to graduate work immediately after completing a bachelor's degree are

significantly more likely to complete the degree than are groups with a longer time lapse between undergraduate and graduate work. This is true both for regular and summer session entrants.

During regular sessions, students who enter with split program status are significantly less likely to complete a master's degree than are other groups of degree students; this is not true for graduate students entering during a summer session.

During summer sessions, students who enter graduate work after a lapse of one to five years are significantly less likely to complete the degree than are other groups of degree students; this is not true for graduate students entering during a regular session.

It should be noted that more than half of the entrants in all categories actually do complete the degree, however.